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EXAMINER

LEE, ANDREW CHUNG CHEUNG

ART UNIT

PAPER NUMBER

2664

DATE MAILED: 06/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/974,827

Applicant(s)

YOKOYAMA ET AL.

Examiner

Andrew C. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

2. The disclosure is objected to because of the following informalities:

- The line numbering for Specification, Abstract, and claims is missing.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 2, 3, 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Kramer et al. (U.S. Patent No. 6658027 B1).

Regarding claim 1, Kramer et al. discloses the limitation of a quality control device for voice packet communications for transmitting voice packets through a quality

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non-assurance type network (Fig. 1, element 100, element 50, column 3, lines 53 – 59), the device comprising a buffer memory for temporarily storing voice packets received through the network and forming a queue of the received voice packets (Fig. 2, element 120, column 3, lines 59 – 61); queue operating means for operating the queue in accordance with an operation control signal to be supplied (Fig. 1, element 140, column 3, line 60 – 61; column 4, lines 57 – 62); sequence examining means for examining vocal properties of a sequence of voice information contained in a plurality of voice packets that constitute the queue stored in the buffer memory (Fig. 2, elements 240, 250; column 4, lines 57 – 58; column 5, lines 39 – 54); and operation control means for changing the operation control signal in accordance with an examination result of the sequence examining means (column 5, lines 29 – 36).

Regarding claim 2, Kramer et al. discloses the limitation of the quality control device of claim 1, wherein the operation control means includes an operation position determining portion for determining an operation position so as to be dispersed onto the queue and outputting an operation position specifying signal as the operation control signal by the use of an examination result of the sequence examining means (column 5, lines 29 – 36); and the queue operating means includes a deletion operating portion for deleting a voice packet existing at an operation position on the queue corresponding to the operation position specifying signal to be supplied from the queue, and/or an insertion operating portion for inserting a complementary voice packet that contains predetermined voice information into an operation position of the queue corresponding

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to the operation position specifying signal to be supplied (column 5, lines 39 – 68).

Regarding claim 3, Kramer et al. discloses the limitation of the quality control device of claim 1, further comprising: threshold managing means for managing an upper limit threshold set at least on an upper limit side with respect to a length of the queue (Fig. 2, element “high Water Mark”, column 5, lines 4 – 5); and queue length monitoring means for monitoring a relationship between a length of the queue and the upper limit threshold (Fig. 2, elements 230, 240, 250; column 5, lines 52 – 54); wherein: the sequence examining means includes: a decoding importance detecting portion for detecting decoding importance that is an importance degree when each voice packet is decoded by examining a sequence of voice information contained by a plurality of voice packets that constitute a queue stored in the buffer memory; and a decoding importance storing portion for temporarily storing the decoding importance detected by the decoding importance detecting portion in correspondence with each voice packet that constitutes the queue (column 3, lines 31 – 34; lines 59 – 61; column 5, lines 39 – 52); and the queue operating means includes: a priority deletion operating portion for preferentially deleting a voice packet assigned to decoding importance whose importance degree is low from the queue when the queue length monitoring means detects that the queue is longer than the upper limit threshold (column 5, lines 52 – 59).

Regarding claim 6, Kramer et al. discloses the limitation of the quality control device of claim 1, further comprising: lower limit threshold managing means for

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managing a lower limit threshold set on a lower limit side with respect to a length of the queue (Fig. 2, element "Low Water Mark", column 5, lines 4 – 6); and queue length/lower limit monitoring means for monitoring a relationship between a length of the queue and a lower limit threshold (Fig. 2, elements 230, 240, 250; column 5, lines 9 – 13; column 9, lines 61 – 67; column 10, lines 1 – 10); wherein the queue operating means includes lower limit correspondence insertion operating portion for inserting a complementary voice packet that contains predetermined voice information so as to be dispersed onto the queue when the queue length/lower limit monitoring means detects that the queue is shorter than the lower limit threshold (column 6, lines 24 – 32; column 10, 1 – 10).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4, 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kramer et al. (U.S. Patent No. 6658027 B1) in view of Rabenko et al. (U.S. Patent No. 6765931 B1).

Regarding claims 4, 5, Kramer et al. discloses the limitation of a quality control device for voice packet communications for transmitting voice packets through a quality

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non-assurance type network (Fig. 1, element 100, element 50, column 3, lines 53 – 59), Kramer et al. does not disclose expressly the limitation of the quality control device of claimed further comprising dual-talk duration extension/contraction tendency detecting means for detecting an extension/contraction tendency of a length of dual-talk duration during which both the voice signal on the voice reception path and the voice signal on the voice transmission path reach a state of voice presence by making a voice presence/absence judgement for a voice signal on a voice reception path corresponding to a transmission direction of a voice packet that constitutes the queue and a voice signal on a voice transmission path opposite to the direction where a voice is received; threshold managing means for managing an upper limit threshold set at least on an upper limit side with respect to a length of the queue; first upper limit threshold changing means for changing the upper limit threshold; and queue length monitoring means for monitoring a relationship between a length of the queue and an upper limit threshold; wherein the first upper limit threshold changing means changes the upper limit threshold in accordance with an extension/contraction tendency detected by the dual-talk duration extension/contraction tendency detecting means. Rabenko et al. discloses the limitation of the quality control device of claimed further comprising dual-talk duration extension/contraction tendency detecting means for detecting an extension/contraction tendency of a length of dual-talk duration during which both the voice signal on the voice reception path and the voice signal on the voice transmission path reach a state of voice presence by making a voice presence/absence judgement for a voice signal on a voice reception path corresponding to a transmission direction of a voice packet that

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constitutes the queue and a voice signal on a voice transmission path opposite to the direction where a voice is received (Fig. 20, element 580, "Rx Data" path, "Tx Data" path; column 33, lines 15 – 23; lines 31 – 39); threshold managing means for managing an upper limit threshold set at least on an upper limit side with respect to a length of the queue; first upper limit threshold changing means for changing the upper limit threshold; and queue length monitoring means for monitoring a relationship between a length of the queue and an upper limit threshold (column 34, lines 44 – 67; column 35, lines 40 – 50); wherein the first upper limit threshold changing means changes the upper limit threshold in accordance with an extension/contraction tendency detected by the dual-talk duration extension/contraction tendency detecting means (column 34, lines 44 – 67; column 35, lines 1 – 11; lines 46 – 50). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kramer et al. to include a quality control device of claimed further comprising dual-talk duration extension/contraction tendency detecting means for detecting an extension/contraction tendency of a length of dual-talk duration during which both the voice signal on the voice reception path and the voice signal on the voice transmission path reach a state of voice presence by making a voice presence/absence judgement for a voice signal on a voice reception path corresponding to a transmission direction of a voice packet that constitutes the queue and a voice signal on a voice transmission path opposite to the direction where a voice is received; threshold managing means for managing an upper limit threshold set at least on an upper limit side with respect to a length of the queue; first upper limit threshold changing means for changing the upper limit threshold; and

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queue length monitoring means for monitoring a relationship between a length of the queue and an upper limit threshold; wherein the first upper limit threshold changing means changes the upper limit threshold in accordance with an extension/contraction tendency detected by the dual-talk duration extension/contraction tendency detecting means such as that taught by Rabenko et al. in order to provide a method of canceling a far end echo from a near end signal including adaptively filtering a far end signal based on adaptation coefficients, detecting whether voice is present on the near end signal, holding the adaptation coefficients constant when voice is present, and canceling the echo from the near end signal after the adaptation coefficients are held constant (as suggested by Rabenko et al. column 1, lines 39 – 45).

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C. Lee whose telephone number is (571) 272-3131. The examiner can normally be reached on Monday through Friday from 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on (571) 272-3134. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ACL

June 18, 2005


Ajit Patel
Primary Examiner